LUXONIX

PURITY

Virtual Sound Workstation

OPERATION MANUAL

ENGLISH

Document Revision 1.1.2 - 27 November 2007

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INSTALLATION

Installation /Uninstallation

To install PURITY on your PC,

1. Insert PURITY CD into your CD-ROM drive, and the installer will be executed.

2. If the installer doesn't appear,
   double-click the 'LUXONIX_PURITY_x_x_x_win.exe' file of 'PC' folder in the CD.

3. Follow the instructions on the screen.

LUXONIX Purity v1.0.0 Setup
PURITY
Welcome to the LUXONIX Purity v1.0.0 Setup Wizard
This wizard will guide you through the installation of LUXONIX Purity v1.0.0.
It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.
Click Next to continue.
Next >
Cancel

To uninstall PURITY from your PC,

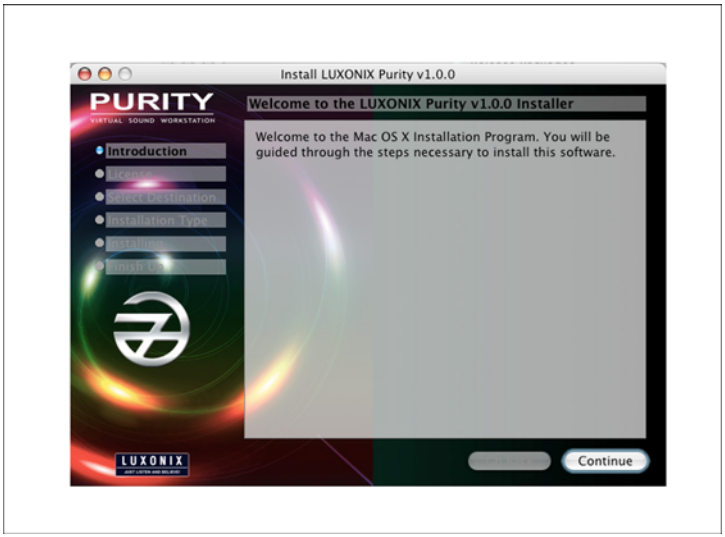
- Use Control Panel :
  Start Menu - Control Panel - Add/Remove Programs - LUXONIX Purity
- Use Short-cut :
  Start Menu - Programs - LUXONIX - Purity - Uninstall Purity

To install PURITY on your Macintosh,

1. Insert PURITY CD into your CD-ROM drive.

2. double-click the 'LUXONIX_PURITY_x_x_x_mac.pkg' file of 'MAC' folder in the CD.

3. Follow the instructions on the screen.

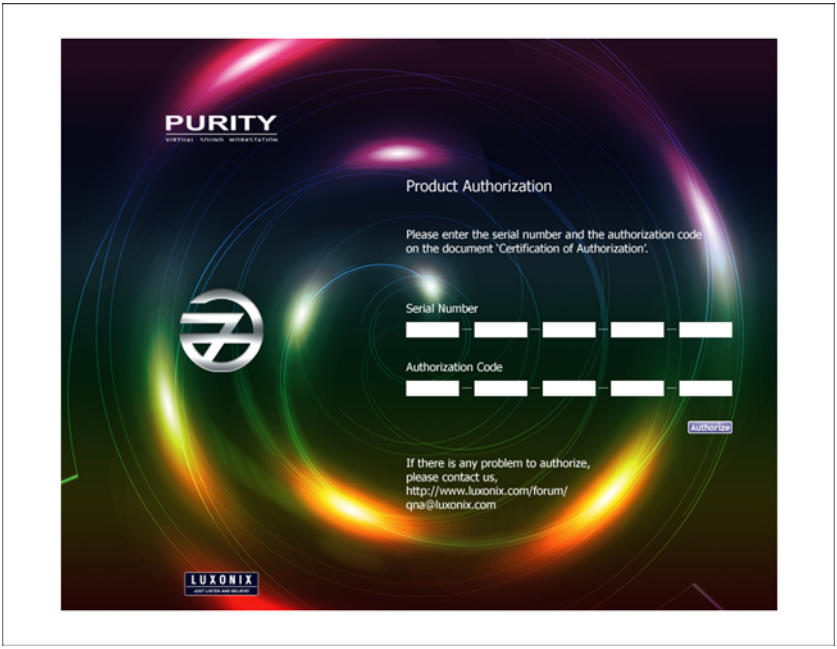


To uninstall PURITY from your Macintosh,

- Use Shell Script :
  /Applications/LUXONIX/Uninstaller/uninstall Purity.command

Authorization

The product authorization dialog will appear when PURITY is launched.



1. Enter your serial number and authorization code on the document, 'Certificate of Authorization'.

2. Click 'Authorize' button to complete the authorize process.

If there is any problem to authorize, please contact us :

- http://www.luxonix.com/forum/

Registration

Please register your ID on the web forum for user support. The registration offers you :

- Free software updates
- Free technical support
- Free downloads (samples, presets, ...)
- and lots more...

To register, please follow :

1. Visit the web forum, and register your ID.
http://luxonix.com/forum/
http://luxonix.com/phpBB2/profile.php?mode=register

2. Send an e-mail to register@luxonix.com, including,
- Your Forum ID
- Your Name
- Product Serial Number
- Product Authorization Code
- Product ID Number

3. Please wait for about 24hours, then you will receive an e-mail and a private message on the forum about the registration.

4. Now you can access the user support area.

INTRODUCTION

Enter the Next Generation.
PURITY is a next generation of digital musical instrument workstation and PCM sound module software. PURITY is designed to realize and surpass the hardware musical instrument workstation perfectly on computer-based music production environments offering higher sound quality and more usability.

Come to the Front.
PURITY provides rich sound sources to create professional music of any kind and any purpose. PURITY is based on well-sampled PCM wave data including a lot of sound of hardware workstations, sound modules, drum machines, vintage analog synths and even modern digital synths. Moreover, PURITY comes with over 1000 ready-to-use sound presets that are most popular in each era of the electronic music. The integrated sequencer and the sequenced patches inspire your musical potential.

Forget Everything but Music.
PURITY makes you concentrate on your music without being annoyed about anything not related to music. Thanks to NAVIv2 engine and FOEM+, PURITY keeps the fame of the best software instrument with the lowest and most efficient CPU load and RAM usage. PURITY will be the one of your best musical tools which can effectively express the musical idea and feeling that you have.

Features

16-part multi-instrument with GM Support
- channel link function allows to layer sound patches
- key/velocity range for splitting sound zone
- General MIDI normal/rhythm sound and control compatible
- 2 modes well-designed for each channel purpose - Melody/Drum

Integrated Mixer
- realtime audio level meters
- priority mode for arranging patches
- 2 stereo output buses - main/sub

- 2 stereo send-return effect buses - chorus/reverb
- up to 1024-voice global polyphony (64 per channel)

Integrated Pattern Sequencer
- innovative structure for melody and drum
- up to 64 steps and 5 lanes
- rate time option with triplet
- swing option to vary time rate
- latch function for background pattern

Super-fast Preset Browser
- fast patch change on-the-fly during live performance
- over 1000 factory sound presets
- 5-color patch recognition
- computer keyboard full support

24 types of Insert Effect
- filters and EQ
- compressors, overdrive and distortions
- bit crusher, noise generator and stereo image
- chorus, flanger, phaser and wah-wah
- tremolo and auto-pan
- delays and reverbs

Easy-to-use Edit Panel
- full-featured edit without paging
- ergonomic placement and design
- graphic envelope

Integrated MIDI Keyboard
- position-to-velocity-sensitive 88-key
- 2 wheels - Pitch Bend / Modulation

Global Setup
- options for system resources
- options to identify user interface

Plug-in Interfaces / Stand-alone
- Steinberg VST 2.4
- Apple Audio Units 2 (AU)
- Stand-alone - ASIO 2.2, WDM/KS, DirectSound, CoreAudio

Technologies

NAVIv2: Neo Architectonic Virtual Instrument engine v2

The Classic NAVI engine is designed especially for taking the full advantage of software instruments and is used in the LUXONIX's famous products that are applauded from the music scene.
Now NAVI engine has been evolved into version 2 with more compatibility, efficiency, ease to use. NAVIv2 will give an impact to your musical instrument software environment, and will be the standard of it.

FOEM+: Fully Optimized Effecting Module Plus

Award-winning best multi-effect framework, FOEM lets you enjoy handy and solid sound processing with simple but reasonable parameters and well-optimized signal processing technologies.
FOEM includes 24 high-quality effector algorithms based on the real world musical effect technologies. Each algorithm realizes the very effect you have on your mind, so you don't have to hesitate any more about which effector to choose.

System Requirements

PC system requirements

- Intel Pentium III compatible 700 MHz CPU (Intel Pentium IV compatible 1.6GHz or higher recommended)
- 128MB RAM (256MB or higher recommended)
- about 100MB hard disk space
- CD-ROM drive or higher optical disc device
- Microsoft Windows 2000/XP or higher
- VST 2.0 compatible host application recommended

Macintosh system requirements

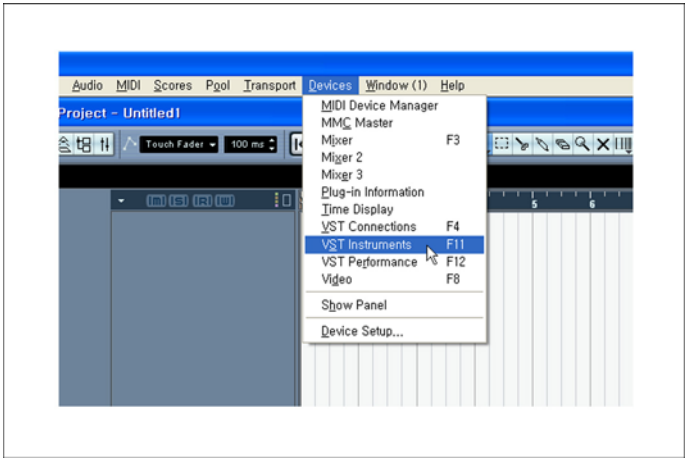
- G3 700Mhz CPU (G4 1.67GHz or higher recommended) or Intel-based Mac
- 128MB RAM (256MB or higher recommended)
- about 100MB hard disk space
- CD-ROM drive or higher optical disc device
- Mac OS X 10.4 Tiger or higher
- VST 2.0 or Audio Units 2 (AU) compatible host application recommended

MEMO

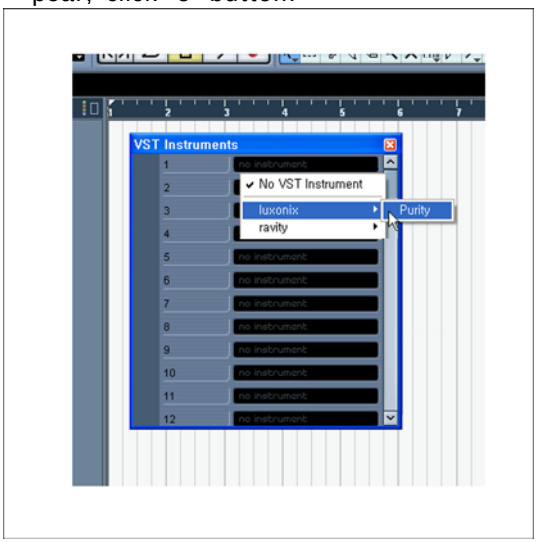
QUICKSTART

with Steinberg Nuendo/Cubase LE/SE/SL/SX

1. Launch Nuendo/Cubase, and make a new project. (File - New Project)
2. Open VST Instrument Rack. (Devices - VST Instruments)



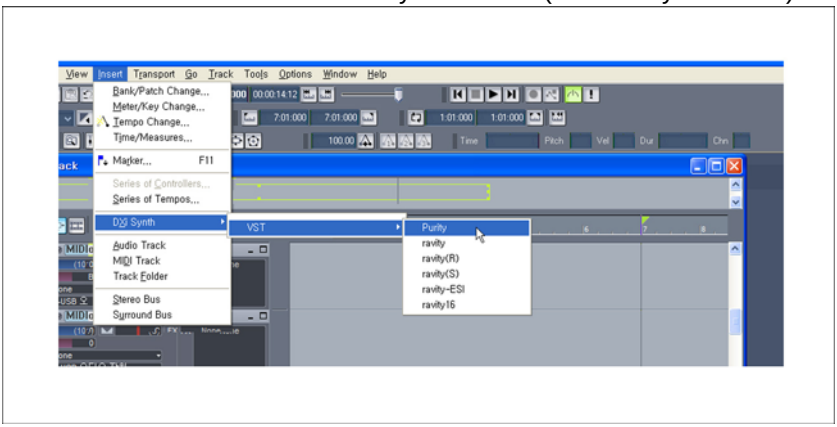
3. Load PURITY on an empty slot. If the PURITY GUI doesn't appear, click 'e' button.



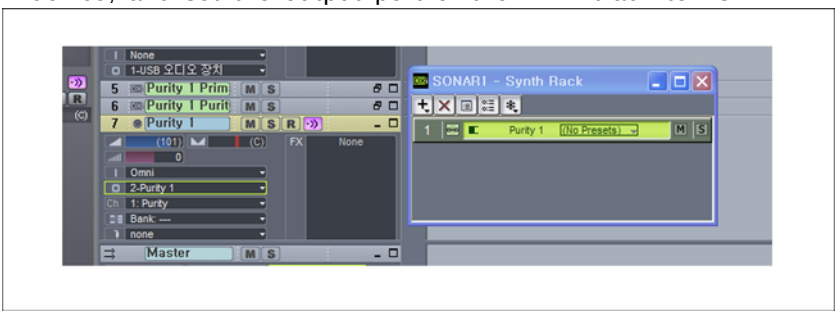
4. Create a MIDI track. (Project - Add Track - MIDI) Enable the record setting of the MIDI track.
5. Set the input port of the MIDI track to your main MIDI input device, and set the output port of the MIDI track to PURITY.
6. Enjoy!

with Cakewalk Sonar 4

1. Launch Cakewalk VST Adapter and re-search VST plug-ins.
2. Launch Sonar, and make a new project. (File - New)
3. Load PURITY on Synth Rack. (Insert - DXi Synth - VST - PURITY) Please note that 'First Synth Output' option may mute the sub bus of PURITY. If the PURITY GUI doesn't appear, double-click the PURITY slot in Synth Rack. (View - Synth Rack)



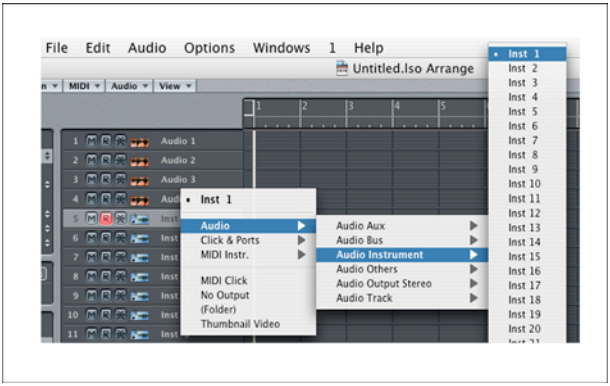
4. Create a MIDI track. (Insert - MIDI Track) Enable the record setting of the MIDI track.
5. Set the input port of the MIDI track to your main MIDI input device, and set the output port of the MIDI track to PURITY.



6. Enjoy!

with Apple Logic 7

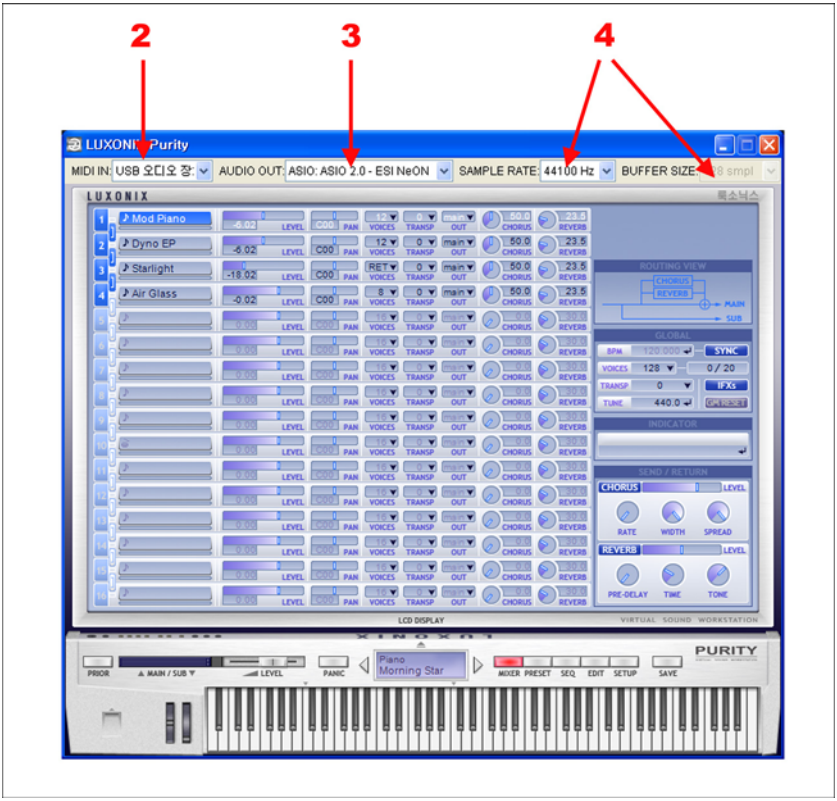
1. Launch Logic, and make a new project. (File - New)
2. Create an audio instrument track, or set an existing audio or MIDI track to an audio instrument track by clicking onto it, holding down the mouse button down and choose Audio - Audio Instrument - Inst 1.



3. Double-click the audio instrument track to open the environment window.
4. Load PURITY on an instrument track by clicking onto the insert slot, holding down the mouse button and choose PURITY. If the PURITY GUI doesn't appear, double-click on the PURITY slot.

5. Enjoy!

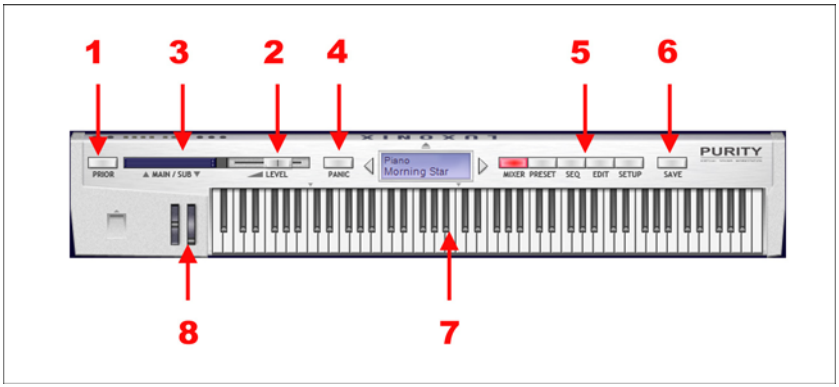
PURITY stand-alone



1. Launch PURITY on your desktop or program menu. (Start - Programs - LUXONIX - Purity)
2. Set the MIDI input port to your main MIDI input device.
3. Set the audio driver and output port to your main audio output device.
4. Set the sample rate and the buffer size as you want. Too high sample rate or too small buffer can cut down the latency, but may cause 'glitch' sound.
5. When the caps lock is on, you can use your computer keyboard as the virtual MIDI keyboard.
6. Enjoy!

ARCHITECTURE

Keyboard



1. Priority On/Off : Toggles the priority mode. When it's on, all MIDI messages are sent only to the current selected and linked channels, other channels are muted. It's very useful to preview and load patches to any channel irrespective of the MIDI channel setting.

2. Master Volume : Adjusts the master volume that is applied to both main and sub bus.
3. Master Level Meters : Show the current audio level of main and sub bus with peak detecting.

4. Panic : All notes off. Stops all arpeggiators and sequencers.

5. Mixer/Preset/Sequencer/Edit/Setup : Switches the display to the selected one.

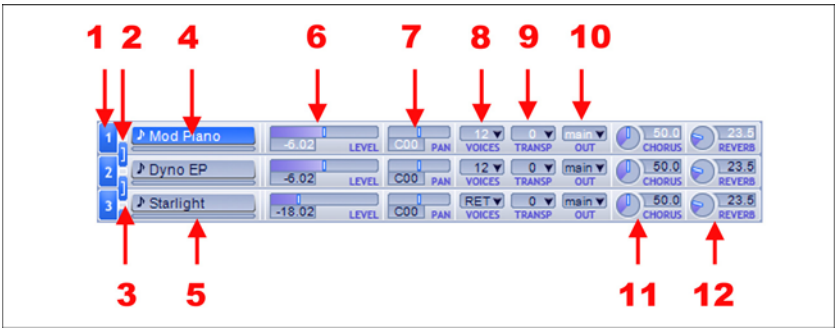
6. Save: : Saves current patch to user bank.

7. Keyboard : Plays notes with velocity response by click-point.
8. Pitch Bend / Modulation Wheel

Mixer

To see the Mixer, click the MIXER button or press 'M' key.

Channel



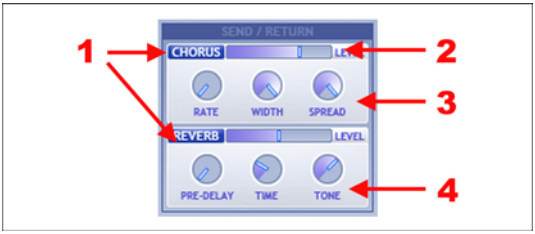
1. Channel On/off : Activates or de-activates the channel. De-activated channels are muted.
2. Channel Link : Links two or more channels, so that those linked channels response at once.

3. Channel MIDI Signal Indicator : Blinks when MIDI signal is inputted to the channel.
4. Channel Name : Displays the name of channel patch. The area for channel selection. To edit the name, double-click it. To load a patch onto the channel, click the mouse right button on the channel name.
5. Channel Level Meter : Shows the current audio level of the channel.
6. Channel Volume : Adjusts the audio level of the channel.
7. Channel Pan : Adjusts the panorama setting of the channel.
8. Channel Voice Limit : Adjusts the voice limit setting of the channel up to 64.
   - 'RET' : mono re-trigger
   - 'LEG' : mono legato
9. Channel Transpose : Adjusts the key transpose setting of the channel within a range from -48 to 48 semitones.
10. Channel Output Bus : Routes the audio output of the channel to main or sub bus. Please note that the sub bus has no send/return routing.
11. Channel Chorus Send Level : Adjusts the send level to the chorus bus.
12. Channel Reverb Send Level : Adjusts the send level to the reverb bus.

Global Setting

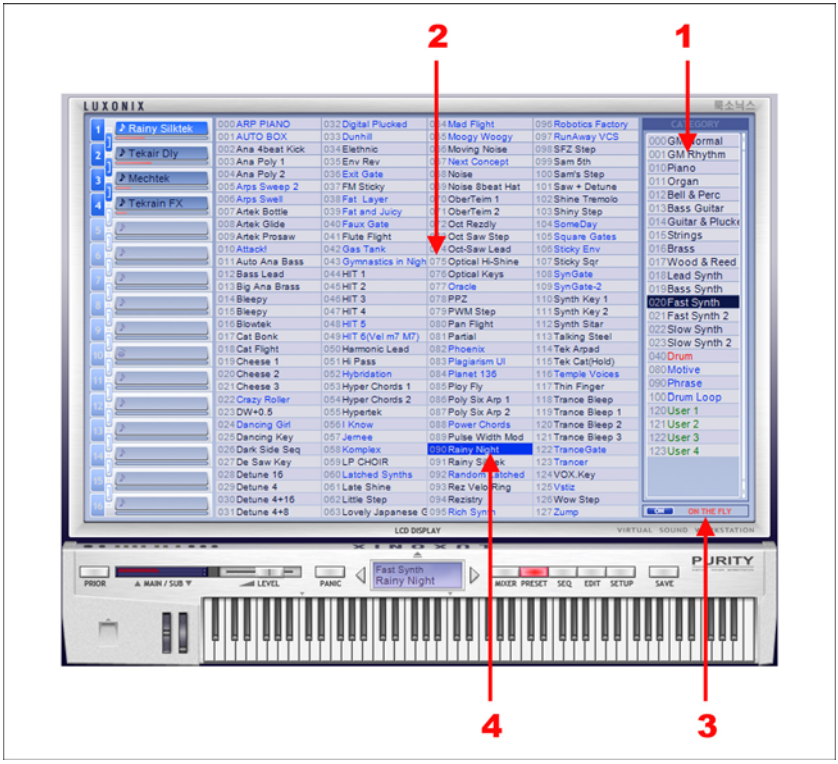
1. BPM : Sets master tempo overriding the tempo of the host application. It's ignored when the SYNC button is on.
2. Master Voice Limit : Limits the number of voices globally.
3. Master Transpose : Sets the MIDI note transposition globally.
4. Master Tune : Sets the total pitch within a range from 415.3 to 466.2 Hz. The default value is 440.0 Hz.
5. IFXs Master On/off : Toggles every insert effect of all channels bypass globally on and off.
6. GM Reset : Resets all channels to the default patch setting of GM.
7. Value Indicator : Shows the name and value of the parameter.

Send-Return



1. Chorus/Reverb On/off : Turns on or off the send-return effect bus. The bus turned off is muted.
2. Return Level : Adjusts the return level of the bus.
3. Chorus Rate/Width/Spread : Adjusts the rate time, the intensity and the phase difference of the global chorus.
4. Reverb Pre-delay/Time/Tone : Adjusts the pre-delay time, the reverb time and the brightness of the global reverb.

Preset Browser

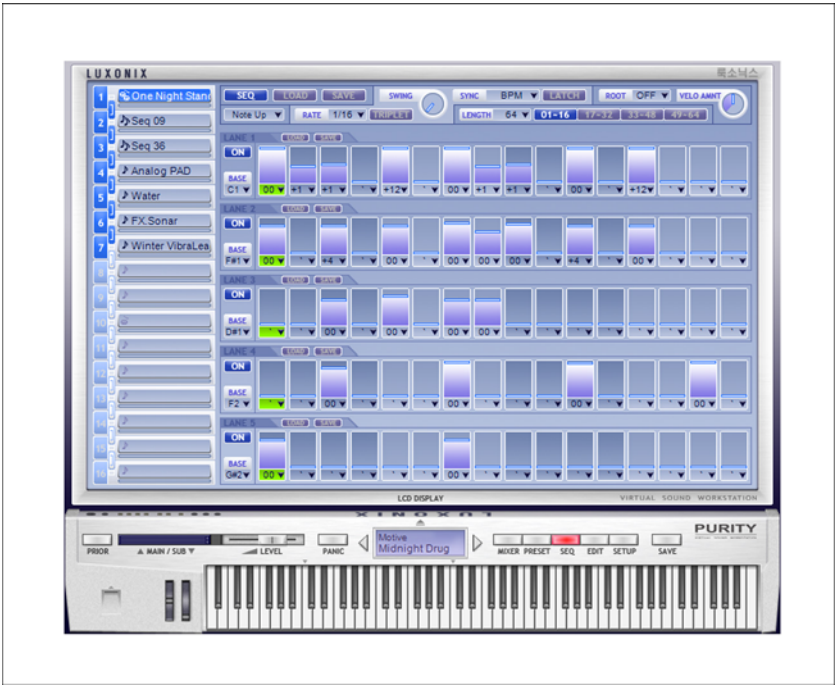


To see the Preset Browser, click the PRESET button or press 'P' key.

1. Category List : Select a category on the right side of the Preset Browser. You can also use PageUp key and PageDown key.
2. Patch List : Select a patch on the left side of the Preset Browser. The arrow keys can be used to navigate patches. To load a patch, simply double-click it or press Enter key. On loading a patch contains two or more channels' parameters (blue-colored as default) the setting will be loaded onto the channels below from the current selected channel.
3. 'On the Fly' Mode : When it's on, you can load a patch by just one mouse click instead of double-click, or the arrow keys without Enter key.

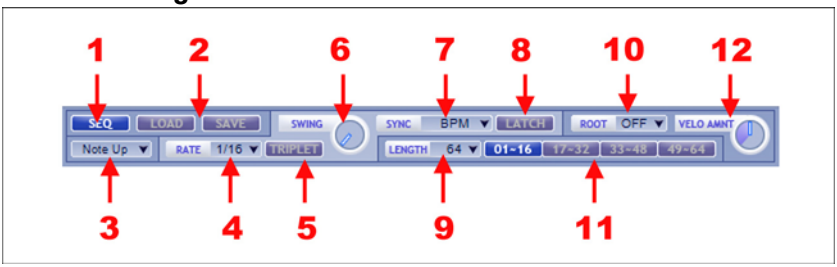
4. Patch Color : To assign a color to distinguish patches with your taste, use the mouse right button/Ctrl-click on the patch name, or '1'~'5' key on your computer keyboard.

Sequencer



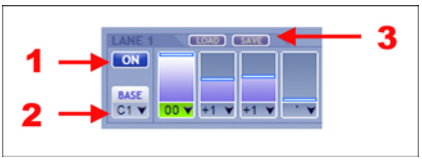
To see the Sequencer, click the SEQ button or press 'S' key.

Global Setting



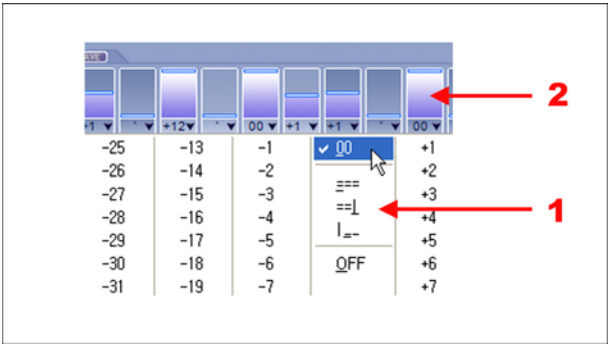
1. Seq On/off : Turns on and off the sequencer of each channel. Please note that Using the sequencer and arpeggiator at the same time is not available, so turning on the sequencer disables the arpeggiator on the channel.
2. Seq Load/Save : Loads and saves the sequence pattern from/to file. Please note that when load .mid file, the Seq Rate setting and the channel setting (1 to 5) of the file affect the result.
3. Seq Note Order : Sets the order of inputted notes.
   - as played : no sort.
   - note up : sort by note, low to high.
   - note down : sort by note, high to low.
4. Seq Rate : Sets the speed of the sequencer to synchronize with the BPM tempo of the host application within a range from 1/1(1bar) to 1/128 note.
5. Seq Rate Triplet : Determines whether the note of the rate setting is a triplet or not.
6. Seq Rate Swing : Adjusts the rate of the duration between the odd and even notes.
7. Seq Sync : Sets the sync type.
8. Seq Latch : Toggles the latch mode on and off. When it's on, the sequence pattern is kept playing even after you release the MIDI notes.
9. Seq Length : Sets the length of the sequence pattern within a range from 1 to 64 steps.
10. Root Pitch : This parameter is only for drums, shifts the pitch of the wave by the MIDI note on the basis of the Root Pitch setting.
11. Step Part Select : Select the displayed part of the whole steps.
12. Seq Velocity Amount : Sets the amount of total level change caused by the MIDI note velocity.

Lane



1. Lane On/off : Toggles the lane on and off.
2. Base Note : Sets the base note position of each lane.
3. Lane Load/Save : Loads/Saves the lane setting form/to file. Please note that when load .mid file, the Seq Rate setting affects the result.

Step

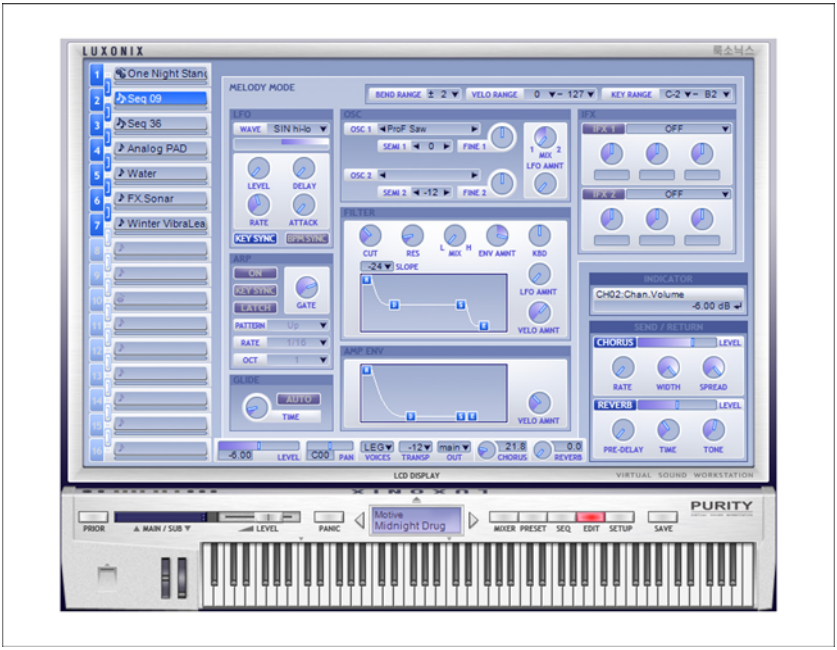


1. Step Note : Sets the relative note of each step within a range from -48 to +48 semitones. The note played by the sequencer is 'Base Note + Step Note'.

- '===' : equal to the left step. (no another note on)
- '==|' : note off at the end of the step, useful to re-triggering melody.
- '|__' / 'OFF' : note off at the begin of the step.

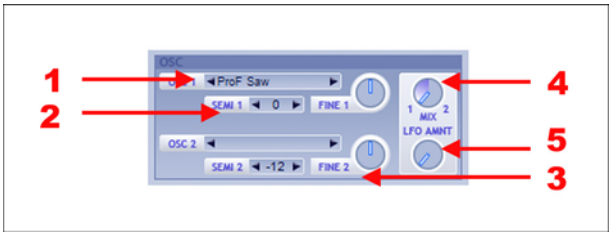
2. Step Volume : Sets the volume of each step within a range from 1 to 100%.

Edit Panel - Melody



To see the Edit Panel, click the EDIT button or press 'E' key.

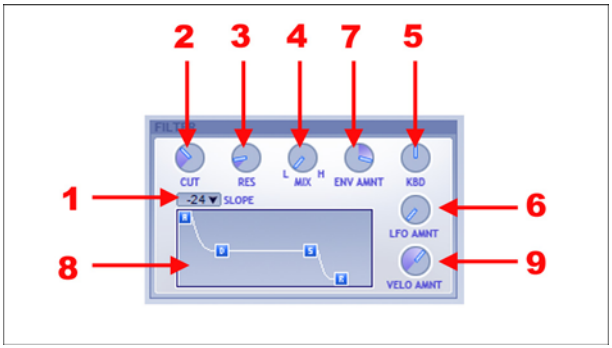
Oscillators



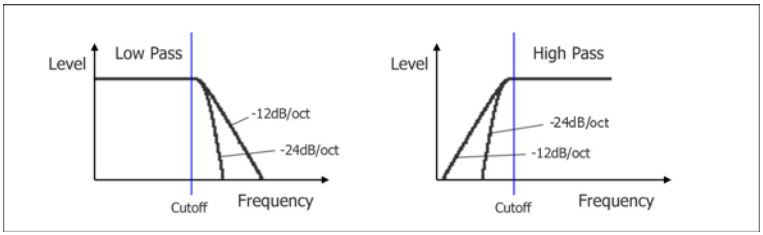
1. Osc Wavetable : Displays the wavetable name currently being used. To change the wavetable, click the name of wavetable or press the arrow buttons on both sides. To make an Oscillator unused, select '<empty>' item. The name of an unused Oscillator is blank.
2. Osc Semitone : Sets the pitch of each Oscillator by semitones within a range from -48 to +48 semitones.

3. Osc Finetone : Sets the pitch of each Oscillator in detail within a range from -100 to +100 cents.
4. Osc Mix : Adjusts the level balance of 2 Oscillators. It's ignored when any Oscillator is unused.
5. Osc LFO Amount : Sets the amount of Oscillator pitch through LFO signal. If the amount is 100%, the pitch will be changed within a range from -32 to +32 semitones.

Filter

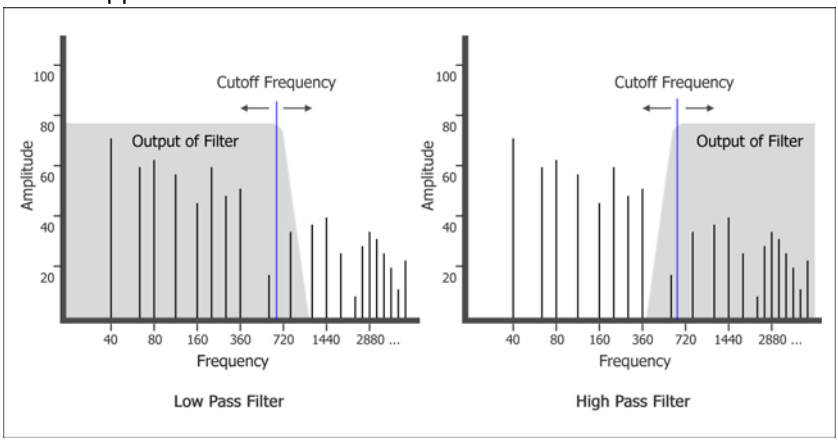


1. Filter Slope : Sets the type of the frequency response of the filter.

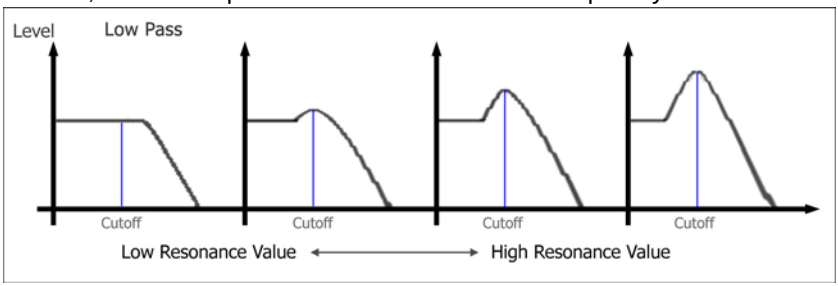


- '-12' : the volume drops by 12dB per octave.
- '-24' : the volume drops by 24dB per octave.

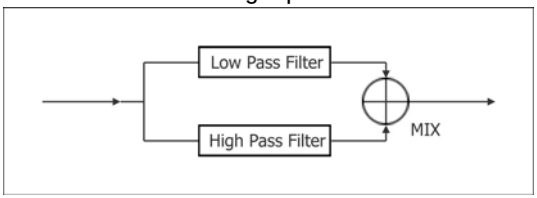
2. Filter Cutoff : Adjusts the cutoff frequency in the order of Hz that applies to both LPF and HPF.



3. Filter Resonance : Adjusts Q or emphasis, the resonance of the filter, which amplifies the band of cutoff frequency.



4. Filter Mix : Sets the level balance between the low-passed sound and the high-passed sound.

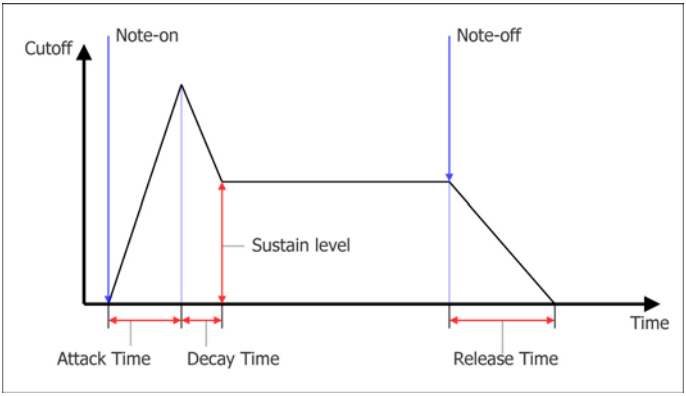


5. Filter Keyboard Tracking : Changes the cutoff frequency according to the pitch of each note.
- the value is over 0%, the higher note, the higher cutoff frequency.
- the value is under 0%, the higher note, the lower cutoff frequency.

6. Filter LFO Amount : Sets the amount of cutoff frequency change caused by the LFO signal.

7. Filter Envelope Amount : Sets the amount of the cutoff frequency change caused by the filter envelope generator. When the value is under 0%, the envelope is inverted.

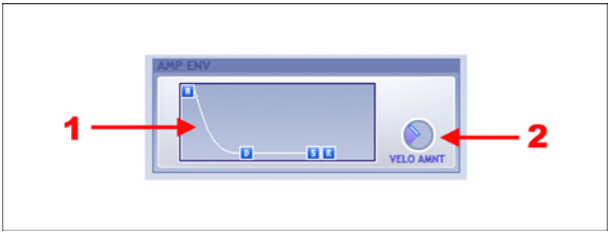
8. Filter Envelope Generator : Changes the cutoff frequency as time elapses.



- A : the attack time within a range from 0 to 10 seconds.
- D : the decay time within a range from 0.01 to 30 seconds.
- S : the sustain level within a range from 0 to 100 percents.
- R : the release time within a range from 0.01 to 20 seconds.

9. Filter Envelope Velocity Amount : Sets the amount of total level change of the envelope generator, caused by the MIDI note velocity. When the amount is set to 100%, the level of the filter envelope will be hypersensitive to the change of the velocity of each note.

Amplifier Envelope



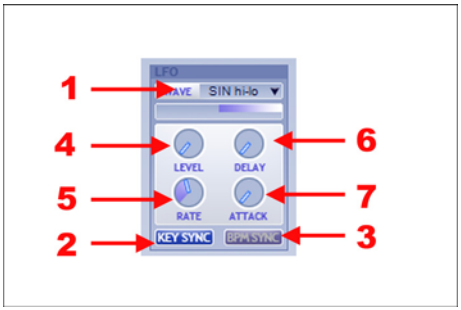
1. Amp Envelope Generator : Changes the volume as time elapses.

- A : the attack time within a range from 0 to 10 seconds.
- D : the decay time within a range from 0.01 to 30 seconds.
- S : the sustain level within a range from 0 to 100 percents.
- R : the release time within a range from 0.01 to 20 seconds.

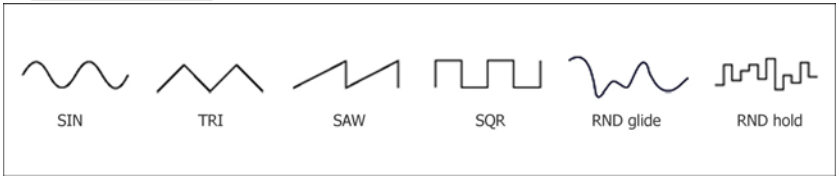
2. Amp Envelope Velocity Amount : Sets the amount of total level change of the envelope generator, caused by the MIDI note velocity. When the amount is set to 100%, the level of amp envelope will be hypersensitive to the change of the velocity of each note.

LFO

LFO, Low Frequency Oscillator generates wave signal with very low frequency. It is often used for changing the pitch or the cut-off frequency of the filter.



1. LFO Waveform : Selects the LFO waveform.



2. LFO Key Sync : Sets the period of the LFO to synchronize with the MIDI note.

3. LFO BPM Sync : Sets the speed of the LFO to synchronize with the BPM tempo of the host application.

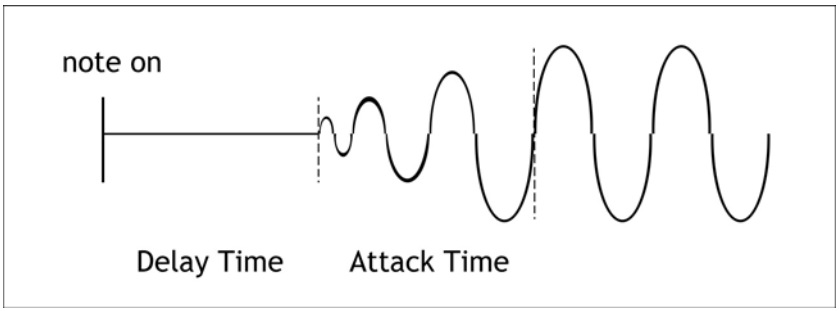
4. LFO Level : Adjusts the level of the LFO signal.

5. LFO Rate : Sets the speed of the LFO.

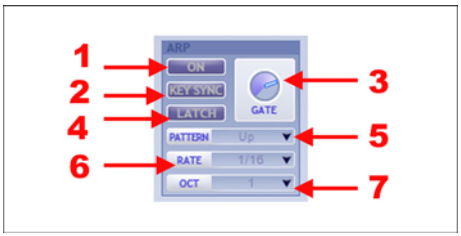
- When the LFO BPM Sync is turned off, you can control the LFO Rate by Hz unit within a range from 0.01 to 50 Hz.
- When the LFO BPM Sync is turned on, you can control the LFO Rate by the note unit within a range from 8/1(8bars) to 1/32T note.

6. LFO Delay : Adjusts the delay time within a range from 0 to 10 seconds.

7. LFO Attack : Adjusts the attack time within a range from 0 to 10 seconds.



Arpeggiator



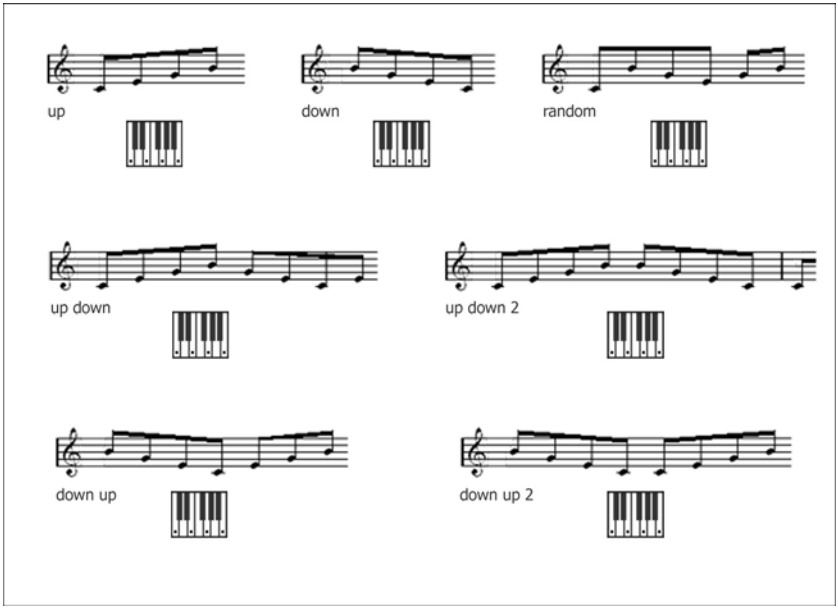
1. Arp On/off : Switches the arpeggiator of each channel on and off. Please note that the arpeggiator is only available when the sequencer of the channel is off.

2. Arp Key Sync : Sets the period of the arpeggiator to synchronize with the MIDI note.

3. Arp Gate : Sets the length of the note played by the arpeggiator within a range from 0 to 100 percents.

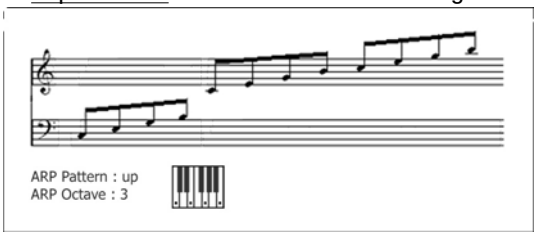
4. Arp Latch : Toggles the latch mode on and off. When it's on, the notes are kept playing even after you release them.

5. Arp Pattern : Sets the pattern of the arpeggio.

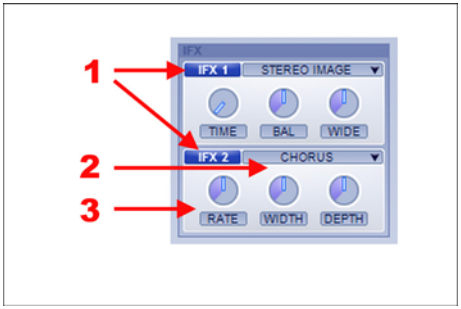


6. Arp Rate : Sets the speed of the arpeggiator to synchronize with the BPM tempo of the host application within a range from 1/1D(1.5bar) to 1/32T note.

7. Arp Octave : Sets the octave range of the arpeggiator.

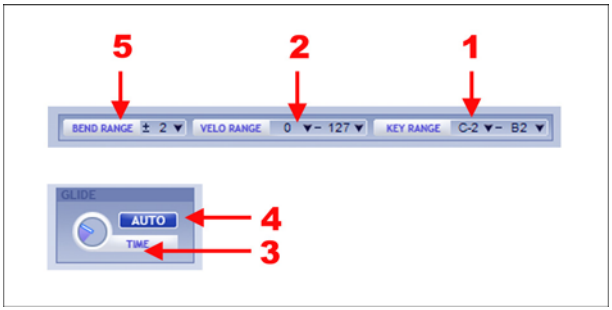


Insert FXs

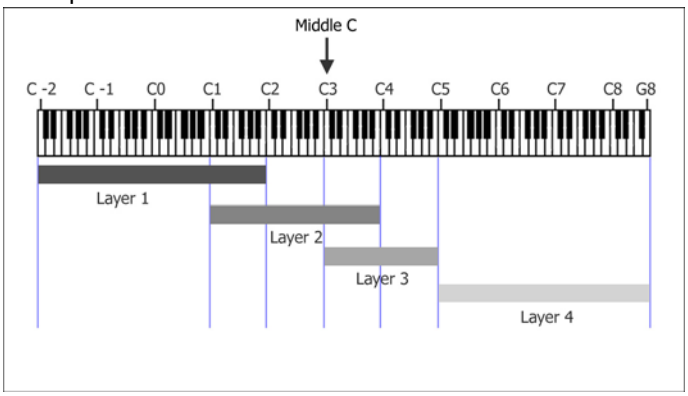


1. IFX On/off : Turns on and off the insert effect of the channel.
2. IFX Type : Sets the type of the insert effect of the channel.
3. IFX Parameters : Adjusts the parameter values of the insert effect of the channel. Refer to Appendix - Lists of Insert FXs.

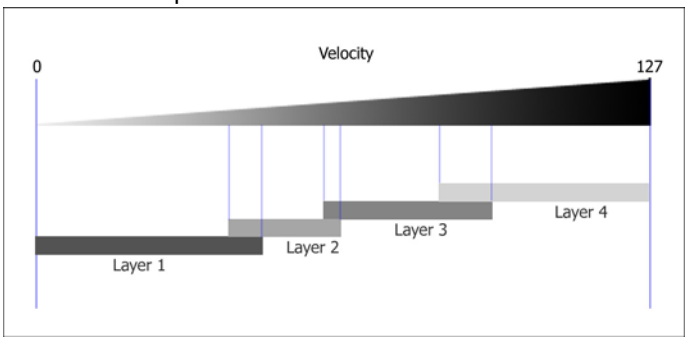
Etc.



1. Key Range : Sets the MIDI note key range that the channel responds to.

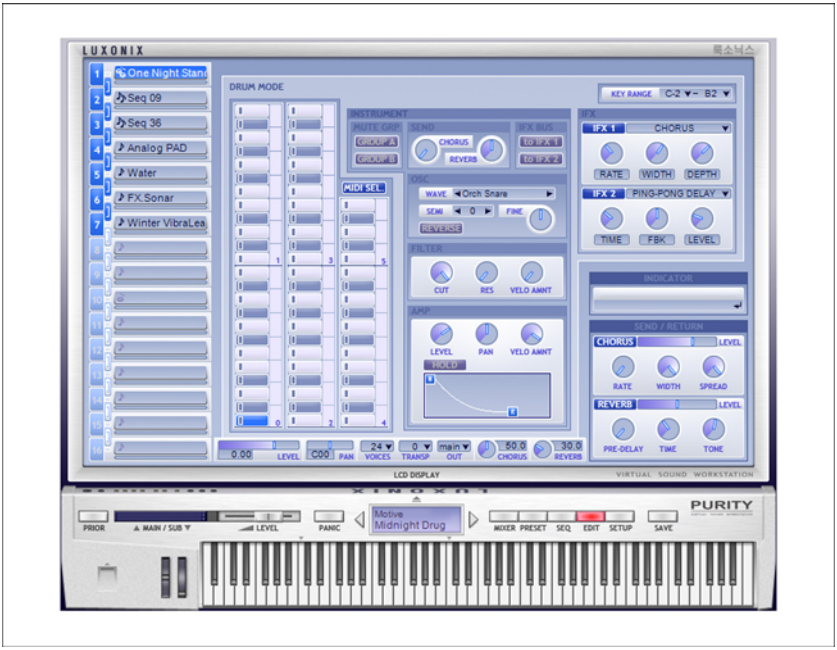


2. Velocity Range : Sets the MIDI note velocity range that the channel responds to.



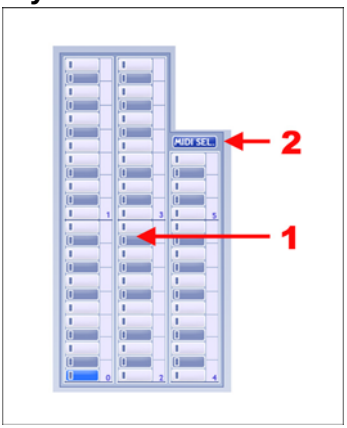
3. Glide Time : Sets the time of portamento which cross-fades the pitch, velocity and frequency of the filter cutoff.
4. Glide Auto Mode : When it's on, the pitch will automatically glide from the note you played last to the one you play now even the last note has been released.
5. Pitch Bend Range : Sets the pitch bend range within a range from 0 to 24 semitones.

Edit Panel - Drum



To see the Edit Panel, click the EDIT button or press 'E' key.

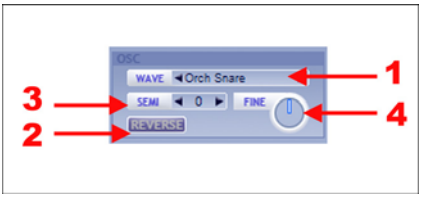
Keys



1. Keys : To select an instrument, simply click the key.

2. MIDI Select On/off : When it's turned on, you can select an instrument by pushing the MIDI keyboard note.

Oscillator



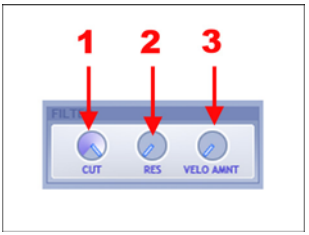
1. Osc Wave : Displays the wave name currently being used. To change the wave, click the name of wave or press the arrow buttons on both sides.

2. Osc Reverse : Makes the wave reversed.

3. Osc Semitone : Sets the pitch of the wave within a range from -12 to +12 semitones.

4. Osc Finetone : Sets the pitch of the wave in detail within a range from -100 to +100 cents.

Filter

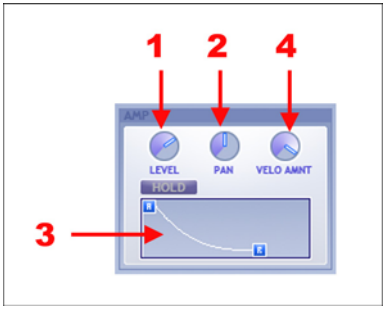


1. Filter Cutoff : Adjusts the cutoff frequency in the order of Hz.

2. Filter Resonance : Adjusts the resonance of the filter.

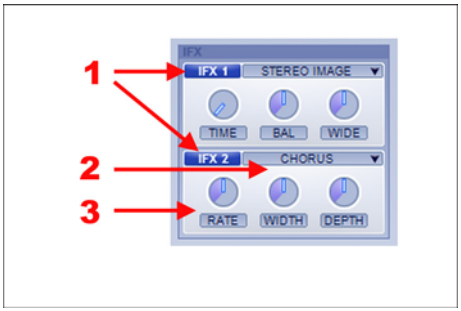
3. Filter Velocity Amount : Sets the amount of total level change of the cutoff, caused by the MIDI note velocity.

Amplifier



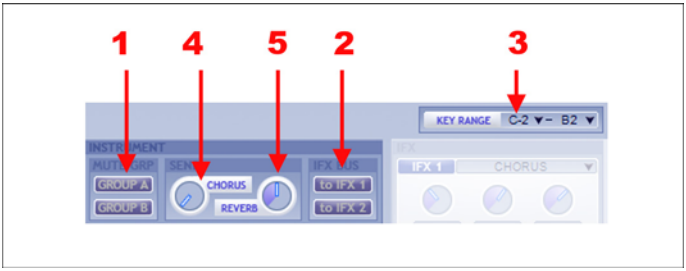
1. Amp Level : Sets the volume level of each instrument.
2. Amp Pan : Sets the pan of each instrument.
3. Amp Envelope Generator : Changes the volume as time elapses.
   - A : Sets the attack time within a range from 0 to 10 seconds.
   - Hold : Determines whether the envelope is held before R until a note off message is received or not.
   - R : Sets the release time within a range from 0.01 to 20 seconds.
4. Amp Envelope Velocity Amount : Sets the amount of total level change of the envelope generator, caused by the MIDI note velocity.

Insert FXs



1. IFX On/off : Turns on and off the insert effect of the channel.
2. IFX Type : Sets the type of the insert effect of the channel.
3. IFX Parameters : Adjusts the parameter values of the insert effect of the channel. Refer to Appendix - Lists of Insert FXs.

Etc.



1. Mute Group Select Button : You can set it to the one of 2 mute groups, A or B. Cells tied in the same mute group will work in the monophonic mode. If you click on instrument, other instruments in the same mute group will be marked in blue color. To tie a instrument in no mute group, simply click the selected mute group button again and it will be turned off.
2. To-IFX Button : Determines which IFX is applied to the sound of each instrument, or not any IFX.
3. Key Range : Sets the MIDI note key range that the channel responds to.
4. Instrument Chorus Send Level : Adjusts the chorus send level of each instrument.
5. Instrument Reverb Send Level : Adjusts the reverb send level of each instrument.

Setup

To see the Setup View, click the SETUP button.

Global

1. Velocity Response Curve : Selects the velocity response curve that is proper for your MIDI master keyboard or controller.
2. Master Transpose to Drum : Determines whether the master transpose setting affects drum channels also or not.
3. Master Tune to Drum : Determines whether the master tune setting affects drum channels also or not.
4. Ignore Patch BPM : Determines whether the BPM setting of patches is ignored or not.
5. Stereo Mix-down Mode : Toggles the stereo mix-down mode. When it's on, the sub output bus are muted, instead mixed to the main output bus.
6. Full RAM Share Mode : Toggles the RAM share mode on and off.
   - when it's on, all wave data are loaded at once, and shared by every instance. This mode makes the patch change very fast, using about 64MB of RAM space, not any more. (in the default factory wave data only)

- when it's off, the only used wave data are loaded on the fly. This mode uses the smallest RAM space, but the patch change can be slow.

User Interface

1. Hot-Key Support : Enable or disable the hot-keys from the computer keyboard.
2. Control Value : Sets the option for displaying the value of parameter.
   - adjust only : the value is displayed during adjusting the control only.
   - mouse over : the value is displayed when the mouse pointer is on the control.
3. MIDI & Automation Map : Sets the option for displaying the state of MIDI & Automation assignments.
   - never : the assigned control number is never displayed.
   - always show : the assigned control number always displayed.

MIDI

1. Program Change : Determines whether Program Change Message is acceptable or ignored.
2. Controllers : Determines whether Control Messages are acceptable or ignored.
   - Pitch Bend : to the pitch (melody only)
   - Volume (#007) : to the channel volume (default=100)
   - Pan (#010) : to the channel pan (default=64)
   - Expression (#011) : to the channel volume (default=127)
   - Sustain (#064) : sustain pedal (melody only)
   - Sostenuto (#066) : sostenuto pedal (melody only)
   - NRPN (#098,#099)
   - RPN (#100,#101)
   - Omni Mode (#124,#125) : to the priority mode
3. Functions
   - Factory : resets MIDI assignments to the factory default setting.
   - Clear : clears all MIDI assignments.
   - Report : reports the MIDI assignments to .txt file.

Tuning Scale

Sets the intonation, the system of tuning. It's applied to Melody channels only.

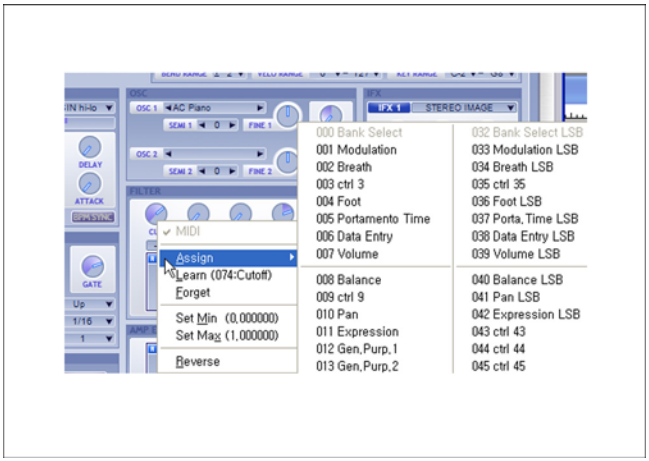
- Equal Temperament
- Well Temperament Vallotti-Young / Werckmeister III
- Meantone Scale
- Pure Temperament C Major / Minor
- Arabic Scale
- Pythagorean Tuning
- User Tuning Scale 1~8 : You can edit the fine pitch settings of each note by inputting the value in cent within a range from -99 to 99.

MIDI Assignment & Automation

To control the parameter through the MIDI CC# or the Plug-in Automation with your host application, click the right button of your mouse on the knob or button and open the MIDI & automation menu.

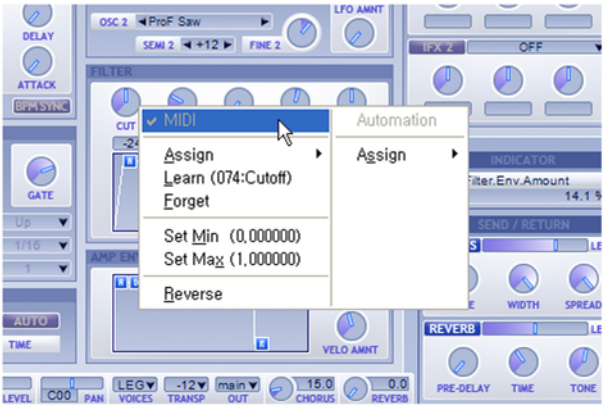
Please note that the MIDI and automation assignments are shared with every instance of PURITY.

MIDI Assign



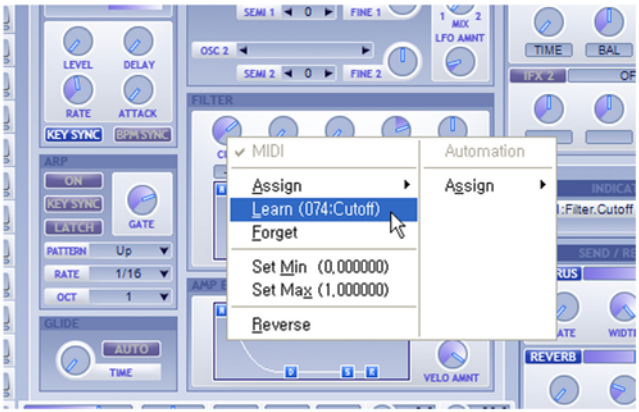
1. Select a MIDI CC# on MIDI - Assign menu, and the parameter is assigned to the MIDI CC#.

2. To check the status, click the right button of your mouse again.



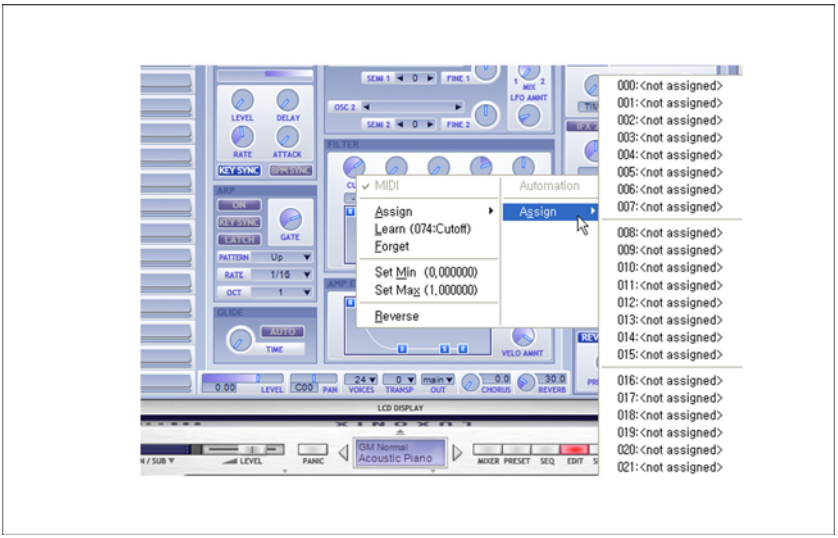
- Forget : Cancels the MIDI Assign.
- Set Min : Sets minimum value controllable by MIDI signal.
- Set Max : Sets maximum value controllable by MIDI signal.
- Reverse : Reverses the increase and decrease of the MIDI signal.

MIDI Learn



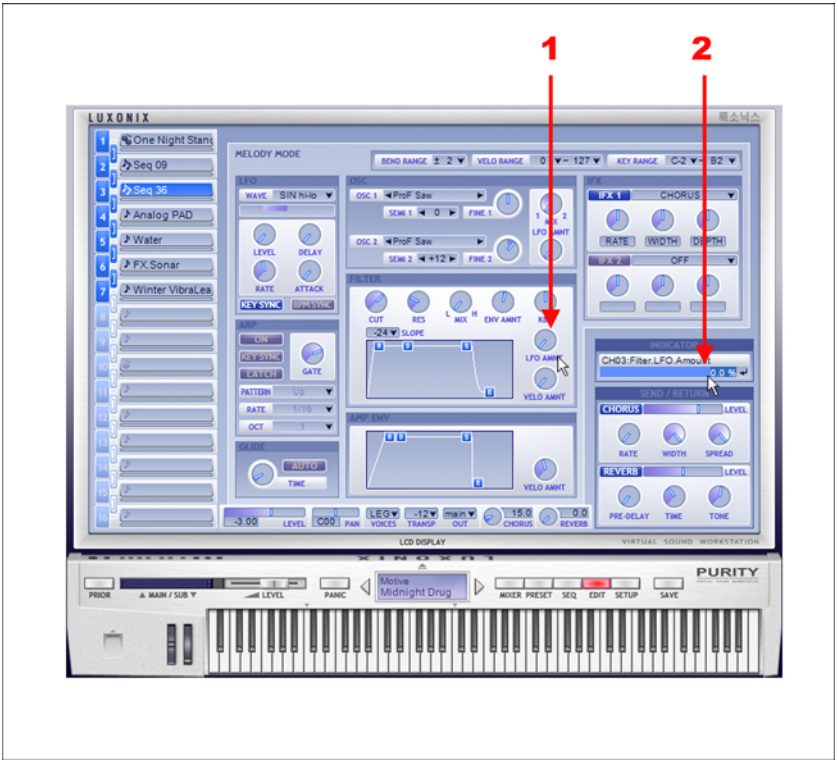
1. Select MIDI - Learn menu, and the parameter will be in the stand-by status to accept MIDI signal. If you select the Cancel menu, PURITY will cancel the stand-by status. You can set multiple parameters to stand-by status, and make them to be controlled by the same MIDI CC#.
2. Tweak the knob or fader of your MIDI controller, then the value of parameter will be affected immediately.

Automation



1. Select a slot on Automation - Assign menu, and the parameter will be assigned to the automation slot.
2. Now the parameter can be automated. Please refer to the manual of your host application.

Inputting Parameter Value



You can directly input the value through the computer keyboard.

1. Simply click the name of parameter, or double-click the knob or fader, etc. Then the value indicator will have the input focus.

2. Input the value onto the value indicator by the computer keyboard. You don't need to input the unit of parameter.

3. To complete the process, press the Enter/Return key after inputting the value. If you press Esc key, the inputted value will be canceled.

MEMO

TROUBLESHOOTING

Question & Answer

PURITY does not appear in the list of available plug-ins inside my host application.

Please update the list of plug-ins consulting the manual of your host application. Maybe PURITY is installed uncorrectly. Please install PURITY again taking care of the path that the plug-ins are installed in.

Why can't I hear any sound?

Please make sure that your speakers are turned on, and audio cables are connected correctly. If you can hear other sound but not from PURITY, check the MIDI input and audio output setting.

PURITY sounds 'glitch'.

Please increase the latency or the size of buffer. Please refer to the manual of your audio device or the host application.

How can I cut down the latency?

Decrease the latency or the size of buffer setting. If the size of buffer is too small, it may cause 'glitch' sound. Please refer to the manual of your audio device or host application.

Any or some hot-keys don't work at all.

Some host applications doesn't support the computer keyboard hot-key to plug-ins. Or it can be disabled in some conditions. Please refer to the manual of the host application.

With Cakewalk Sonar, how can I use PURITY as multi-output instrument?

Please make sure that 'All Synth Outputs' option is checked in Insert DXi Synth Options. (View - Synth Rack)

With AU version, MIDI-controlled parameter value doesn't be written to the track automation.

This problem is caused by the structure of AU. It's not a bug, it's inevitable limit.

Can I use the MIDI Bank Select and Program Change message?

You can use 000 Bank Select MSB, 032 Bank Select LSB and Program Change message.

(MSB LSB PROG)

- 000 000 073 : GM Normal patch 073 (Flute)
- 000 000 008 : GM Rhythm patch 008 (Room Kit) (channel 10)
- 127 052 005 : category 052, patch 005 (Bell & Perc - Bell Pad)

PURITY makes very weird sound.
PURITY makes my computer very slow.
I'm given an error message, "...file is wrong..." everytime.

Some files may be damaged or broken by some reasons such as sudden shut-down. Before everything, please install PURITY again. If the problem isn't solved by re-installing, the only one solution to solve the problem is to delete the file manually. Please note that the user's data may be erased by deleting the file.

Support Information

If you cannot solve your problem with this manual, please don't hesitate to contact us for user support.

Website) http://www.luxonix.com/
Forum) http://www.luxonix.com/forum/
Post) LUXONIX Co.
MujigaeMaeul LG Apt. 210-301,
Gumi-dong, Bundang-gu, Seongnam-si, Gyeonggi-do,
Korea, Republic of.
Zip Code: 463-705

APPENDIX

List of Hot-Keys

[S] Shift | [C] Ctrl(PC) / Cmd(Macintosh) | [A] Alt

Global
- [C]-Up/Down Arrow : Previous/Next Channel
- 'A' : Toggle Priority Mode
- 'Z'/Esc : Panic (all notes, arpeggiators, sequencers off)
- Home/End : Previous/Next Patch
- 'M' : Show Mixer
- 'P' : Show Preset Browser
- 'E' : Show Edit Panel
- 'S' : Show Sequencer
- 'U' : Show Setup View
- 'V' : Save Patch to User Bank
- 'T' : On/off IFXs Master Button
- 'Q' : On/off Channel Sequencer
- 'I' : Toggle MIDI & Automation Map setting
- F1 : Show Manual

Mixer
- '9'/'0' : Increase/Decrease All Channels Volume

Preset Browser
- Up/Down/Left/Right Arrow : Navigate Patches
- PageUp/PageDown : Previous/Next Category
- Enter : Load Patch
- 'F' : Toggle 'On The Fly' Mode
- '1'/'2'/'3'/'4'/'5' : Select Patch Color
- [C]-'I' : Set as Initial Preset

Sequencer
- 'R' : Reset all Lanes and Steps
- Up/Down/Left/Right Arrow : Navigate Lanes and Steps
- [S]-Up/Down/Left/Right Arrow : Select as Block
- Tab/[S]-Tab : Navigate Parts
- '0'~'9' : Set Note Value (Positive)
- [A]-'0'~'9' : Set Note Value (Negative)
- PageUp/PageDown : Increase/Decrease Note Value

- [A]-PageUp/PageDown : Increase/Decrease Note Value (Octave)
- '=' : Set Note Value to '==='
- '\' : Set Note Value to '==|'
- '-' : Set Note Value to '|__'
- Delete/'O'/'`' : Erase a Step
- [C]-'E' : Erase a Step or Block
- [C]-'D'/Delete : Delete a Step or Block
- [C]-'I'/Insert : Insert a Step
- [C]-'C' : Copy a Step or Block
- [C]-'P' : Overwrite Block
- [C]-'V' : Paste Block
- [C]-'B' : Double Block
- [C]-'H' : Half Block

List of Insert FXs

Filter & EQ

S-FILTER 12

A filter with parallel connected -12dB/oct type LPF and HPF.
- Cutoff (20.0 ~ 20000.0 Hz) : Sets the cutoff frequency of the filter.
- Resonance (0.0 ~ 100.0 %) : Sets the resonance of filter.
- Mix (L 100 ~ H 100 %) : Sets the volume balance between low passed and high passed sound.

S-FILTER 24

A filter with parallel connected -24dB/oct type LPF and HPF.
- Cutoff (20 ~ 20000 Hz) : Sets the cutoff frequency of the filter.
- Resonance (0.0 ~ 100.0 %) : Sets the resonance of the filter.
- Mix (L 100 ~ H 100 %) : Sets the volume balance between low passed and high passed sound.

3-BAND EQ

3-band equalizer based on the modeling of channel EQs of famous analog mixers in the market.
- Low (-12.04 ~ +12.04 dB) : Cuts or boosts the band of the low frequency under 80 Hz.
- Mid (-12.04 ~ +12.04 dB) : Cuts or boosts the band of the middle frequency around 2.5KHz.
- High (-12.04 ~ +12.04 dB) : Cuts or boosts the band of the high frequency over 12KHz.

Compressor

PEAK COMPRESSOR

Produces the compressed sound with the peak level detection.

- Threshold (-40.00 ~ 0.00 dB) : Sets the level of threshold.
- Ratio (1.0:1 ~ 20.0:1) : Sets the ratio of compression.
- Release (10 ~ 5000 ms) : Sets the release time of compression.

RMS COMPRESSOR

Produces the compressed sound with the RMS level detection.

- Threshold (-40.00 ~ 0.00 dB) : Sets the level of threshold.
- Ratio (1.0:1 ~ 20.0:1) : Sets the ratio of compression.
- Release (10 ~ 5000 ms) : Sets the release time of compression.

Drive

OVERDRIVE

Simulates the up-to-date overdriven effector.

- Drive (100 ~ 400 %) : Sets the intensity of overdriven sound.
- Tone (0.0 ~ 100.0 %) : Sets the brightness of sound.
- Level (-oo ~ 0.00 dB) : Sets the level of the final output.

DISTORTION

Simulates the powerful distortion effector.

- Drive (100 ~ 800 %) : Sets the intensity of distorted sound.
- Tone (0.0 ~ 100.0 %) : Sets the brightness of sound.
- Level (-oo ~ 0.00 dB) : Sets the level of the final output.

AMP DISTORTION

Simulates the distortion feature of the guitar amplifier.

- Drive (100 ~ 800 %) : Sets the intensity of distorted sound.
- Tone (0.0 ~ 100.0 %) : Sets the brightness of sound.
- Level (-oo ~ 0.00 dB) : Sets the final level of output.

Lo-Fi

CRUSHER

Modulates the sample rate and the bit depth of sound.

- Sample rate (1 ~ 192000 Hz) : Sets the sample rate.
- Bits (1.0 ~ 32.0 bits) : Sets the bit depth.
- Tone (0.0 ~ 100.0 %) : Sets the brightness of sound.

LP NOISE

Realizes the noise effect of the vintage LP turntable.

- Crackle (0.0 ~ 100.0 %) : Sets the level of the crackle noise.
- Dirty (0.0 ~ 100.0 %) : Sets the level of the white noise.

- Year (1950 ~ 2000) : Sets the brightness of noise sound.

Modulation

STEREO IMAGE

Makes the stereo sound and sets the width of the stereo.

- Time (R 10.0 ~ L 10.0 ms) : Sets the time lag between left and right channel.
- Balance (L 100.0 ~ R 100.0 %) : Sets the volume balance between left and right channel.
- Width (0.0 ~ 200.0 %) : Sets the width of the stereo.

AUTO WAH

Offers the wah-wah effect using the LFO.

- Rate (8/1 ~ 1/32T note) : Sets the speed of the LFO.
- Width (0.0 ~ 100.0 %) : Sets the frequency width of the modulation.
- Center (46.7 ~ 3937.9 Hz) : Sets the center frequency.

Tip! To use the pedal wah, set the width as 0.0% on AUTO WAH and tweak the knob of Center real-time.

CHORUS

Realizes the chorus effect.

- Rate (0.10 ~ 20.00 Hz) : Sets the speed of the modulation.
- Width (0.0 ~ 100.0 %) : Sets the intensity of the modulation.
- Depth (0.0 ~ 100.0 %) : Sets the depth of the modulation.

FLANGER

Realizes the flange effect of the tape reel.

- Rate (8/1 ~ 1/32T note) : Sets the speed of the modulation.
- Width (0.0 ~ 100.0%) : Sets the intensity of the modulation.
- Feedback (0.0 ~ 100.0 %) : Sets the level of the feedback.

PHASER

Realizes the phaser effect using the phase difference.

- Rate (8/1 ~ 1/32T note) : Sets the speed of the modulation.
- Width (0.0% ~ 100.0%) : Sets the intensity of the modulation.
- Feedback (0.0% ~ 100.0%) : Sets the level of the feedback.

TREMOLO

Changes the volume using the LFO.

- Wave (Sine/Triangle/Sawtooth/Square) : Sets the LFO waveforms.
- Rate (8/1 ~ 1/32T note) : Sets the speed of the LFO.
- Depth (0.0 ~ 100.0 %) : Sets the depth of the volume change.

AUTO PAN

Changes the pan using the LFO.

- Wave (Sine/Triangle/Sawtooth/Square) : Sets the LFO waveforms.
- Rate (8/1 ~ 1/32T note) : Set the speed of the LFO.
- Depth (0.0 ~ 100.0 %) : Sets the depth of the pan change.

Delay

DELAY

Realizes the general echo.

- Time (1/1 ~ 1/64T note) : Sets the delay time.
- Feedback (0.0 ~ 100.0 %) : Sets the ratio of the feedback.
- Level (-oo ~ 0.00 dB) : Sets the level of the delayed sound.

STEREO DELAY

Realizes the stereo echo.

- Time (1/1 ~ 1/64T note) : Sets the delay time.
- Feedback (0.0 ~ 100.0 %) : Sets the ratio of the feedback.
- Level (-oo ~ 0.00 dB) : Sets the level of the delayed sound.

PING-PONG DELAY

Realizes the stereo ping-pong delay.

- Time (1/1 ~ 1/64T note) : Sets the delay time.
- Feedback (0.0 ~ 100.0 %) : Sets the ratio of the feedback.
- Level (-oo ~ 0.00 dB) : Sets the level of the delayed sound.

Reverberator

GATE REVERB

Simulates the reverb feature of the gate feedback.

- Time (0.00 ~ 5.00 sec) : Sets the reverb time.
- Tone (0.0 ~ 100.0 %) : Sets the brightness of the reverb sound.
- Level (-oo ~ -6.02 dB) : Sets the level of the reverb sound.

ROOM REVERB

Simulates the reverb feature of the small room.

- Time (0.00 ~ 5.00 sec) : Sets the reverb time.
- Tone (0.0 ~ 100.0 %) : Sets the brightness of reverb sound.
- Level (-oo ~ -6.02 dB) : Sets the level of reverb sound.

HALL REVERB

Simulates the reverb feature of the large hall.

- Time (0.00 ~ 5.00 sec) : Sets the reverb time.
- Tone (0.0 ~ 100.0 %) : Sets the brightness of the reverb sound.
- Level (-oo ~ -6.02 dB) : Sets the level of reverb sound.

SPRING REVERB

Simulates the reverb feature of the spring echo.

- Time (0.00 ~ 5.00 sec) : Sets the reverb time.
- Tone (0.0 ~ 100.0 %) : Sets the brightness of reverb sound.
- Level (-oo ~ -6.02 dB) : Sets the level of reverb sound.

Factory Default MIDI Assignment Table

* firmly assigned.

000 Bank Select MSB
032 Bank Select LSB
(MSB LSB)
- 000 000 : *select GM bank
- 127 nnn : *select patch category nnn

001 Modulation
- LFO Level (Melody only)

005 Portamento Time
- Glide Time (Melody only)

006 Data Entry MSB
037 Data Entry LSB
- *the parameter specified by RPN/NRPN

007 Volume
- *affect Channel Volume (default=100)

010 Pan
- *affect Channel Pan (default=64)

011 Expression
- *affect Channel Volume (default=127)

064 Sustain
- *sustain pedal (Melody only)

065 Portamento
- Glide Auto Mode (Melody only)

066 Sostenuto
- *sostenuto pedal (Melody only)

071 Resonance
- Filter Resonance (Melody only)

072 Release Time
- Amp Envelope Release (Melody only)

073 Attack Time
- Amp Envelope Attack (Melody only)

074 Cutoff
- Filter Cutoff (Melody only)

075 Decay Time
- Amp Envelope Decay (Melody only)

076 Vibrato Rate
- LFO Rate (Melody only)

077 Vibrato Depth
- Osc LFO Amount (Melody only)

078 Vibrato Delay
- LFO Delay (Melody only)

091 ExtFx1 Depth
- Channel Reverb Send Level

093 ExtFx3 Depth
- Channel Chorus Send Level

098 NRPN LSB
099 NRPN MSB
(MSB LSB) (nnn: 024=C0)
- 001 008 : *LFO Rate (Melody only)
- 001 009 : *Osc LFO Amount (Melody only)
- 001 010 : *LFO Delay (Melody only)
- 001 032 : *Filter Cutoff (Melody only)
- 001 033 : *Filter Resonance (Melody only)
- 001 099 : *Amp Envelope Attack (Melody only)
- 001 100 : *Amp Envelope Decay (Melody only)
- 001 101 : *Amp Envelope Sustain (Melody only)
- 001 102 : *Amp Envelope Release (Melody only)
- 020 nnn : *nnn-Note Filter Cutoff (Drum only)
- 021 nnn : *nnn-Note Filter Resonance (Drum only)
- 022 nnn : *nnn-Note Amp Envelope Attack (Drum only)
- 023 nnn : *nnn-Note Amp Envelope Release (Drum only)
- 024 nnn : *nnn-Note Osc Semitone (Drum only)
- 025 nnn : *nnn-Note Osc Finetone (Drum only)
- 026 nnn : *nnn-Note Amp Volume (Drum only)

- 028 nnn : *nnn-Note Amp Pan (Drum only)
- 029 nnn : *nnn-Note Reverb Send Level (Drum only)
- 030 nnn : *nnn-Note Chorus Send Level (Drum only)

100 RPN LSB
101 RPN MSB
(MSB LSB)
- 000 000 : *Pitch Bend Range (Melody only)
- 000 002 : *Channel Transpose
- 000 005 : *Osc LFO Amount
- 127 127 : *ignore data entry value

120 All Sounds Off
- *all sounds off

121 Reset
- *reset all controls
- *all sounds off

123 All Notes Off
- *all notes off

124 Omni Off
125 Omni On
- *Priority Mode

126 Mono
127 Poly
- *all sound off

MIDI Implementation Chart

Channel
- Basic Channel Default : 1~16
- Change : 1~16

Mode
- Mode Default : Mode 3 (Poly Mode)
- Messages : Mode 1 (Omni Mode) / Mode 3 (Poly Mode)

Note
- Note number True Voice : n=0~127
- Velocity
  - Note On : O v=1~127
  - Note Off : O v=1~127

Control
- Aftertouch
  - Key : X
  - Channel : O
- Pitch Bend : O
- Control Change : O n=0~127
- Program Change True# : O n=0~127

System
- System Exclusive : O (General MIDI)
- System Common
  - Song Pos : X
  - Song Sel : X
  - Tune : X
- System Real-time
  - Clock : X
  - Commands : X
- Aux Messages
  - Local On/off : X
  - All Notes Off : O
  - All Sounds Off : O
  - Active Sense : X
  - Reset : O

CREDITS

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